

Appl. No. 10/651,550  
Amdt. Dated June 5, 2005  
Reply to Office Action of March 8, 2005

AMENDMENTS TO THE SPECIFICATION

Please replace paragraph [0028] with the following amended paragraph:

[0028] The next step 204 is to generate performance parameter estimates from the sensor data. The performance parameter estimates are parametric data that are indicative of performance in the mechanical system. The performance parameter estimates and indicative of performance in the mechanical system, and are as such are representative of accumulating wear and/or damage in the mechanical system. As will be described in greater detail later, the performance parameter estimates are designed and implemented to monotonic, such that they can be assured to degrade with time as wear accumulates in the mechanical system.

Please replace paragraph [0043] with the following amended paragraph:

[0043] The parameter estimator thus generates performance parameter estimates based on the signature model and the received residuals. The derived performance parameter estimates are indicative of performance in the mechanical system, and as such are representative of accumulating wear and/or damage in the mechanical system. The performance parameter estimates are designed to be monotonic, such that they can be assured to track performance that degrades with time as the mechanical system wears.